

## **MEMORANDUM**

**TO:** Phil Marsosudiro, Eastern Research Group (ERG)

**CC:** Landfill MACT Project File

**FROM:** Michele Laur, Environmental Protection Agency (EPA)

**DATE:** December 24, 1998

**SUBJECT:** Final Meeting Notes for July 30, 1998 Regional, State and Local Stakeholder Meeting

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### **1.0 INTRODUCTION AND PURPOSE OF MEETING**

The July 30, 1998 Regional, State and Local Stakeholder Meeting was the second in a series of meetings that will be held throughout development of the Maximum Achievable Control Technology (MACT) standards for municipal solid waste (MSW) landfills, commonly referred to as the Landfill MACT.

Goals for this meeting included discussion of the following:

- Regulatory mandates under Section 112 of the Clean Air Act (Act);
- MACT development progress to date;
- Information needs for MACT and presumptive MACT (PMACT) development; and
- Future meetings and stakeholder involvement.

Michele Laur of OAQPS chaired the meeting, which included presentations by Lisa Huff and Tom Waddell of ERG. Overheads and handouts used during the meeting are included as attachment A to this memorandum.

## **2.0 LOCATION AND DATE**

This stakeholder meeting was held from 11:00 a.m. to 1:00 p.m. on July 30, 1998 as a teleconference. EPA and ERG staff met in conference room 637 of the Mutual Building at the U.S. Environmental Protection Agency offices in Durham, North Carolina. Regional, State and local stakeholders attended via telephone.

## **3.0 ATTENDEES**

A copy of the attendance list for the meeting is included in Table 1.

## **4.0 DISCUSSION**

The following subsections summarize discussions of numerous topics covered during the stakeholder meeting. Key issues centered around ensuring an efficient regulatory development process that takes into account both the environmental controls required by the New Source Performance Standards (NSPS) for MSW landfills as well as the data gathered while developing the NSPS.

The topics in this memorandum are generally arranged in the same order that they were presented during the meeting. Handouts for the meeting were sent via electronic mail and the post to all attending stakeholders prior to the meeting. These handouts are included as attachment A to this memorandum. Information presented in the slides is generally omitted from the summaries, below, except where necessary to illustrate the discussion.

### **4.1 Regulatory Background and Development Issues for MACT and PMACT**

Michele Laur began the discussion with a review of the EPA's legal authority to develop MACT standards under section 112 of the Clean Air Act. She then discussed the MACT and PMACT development process.

**Table 1. Attendees at July 30, 1998 Landfill MACT Stakeholder Meeting**

NAME	AFFILIATION	PHONE	FAX	EMAIL
Adebola Bamgbose	CT Dept. of Env. Protection, Bureau of Air Mgmt.	860-424-3391	860-424-4063	debola.bamgbose@po.state.ct.us
Ellen Morris	CT Dept. of Env. Protection, Bureau of Air Mgmt.	860-424-3027	860-424-4064	morris.ellen@po.state.ct.us
Thomas Christoffel	NYSDEC, Div. Of Air Resources	518-457-7688	518-457-7688	trchrist@gw.dec.state.ny.us
Lorraine Anderson	MD Dept. of the Environment, Air Quality Permits Program	410-631-4406	410-631-4406	landerson@mde.state.md.us
Baldev Kohli	Penn. Dept. of Environmental Protection	717-772-3974	717-772-3974	kohli.baldev@a1.dep.state.pa.us
James Burt	Air Protection Brance	404-362-4849	404-363-7100	james_burt@mail.dnr.state.ga.us
Venkata Panchakarla	Dept. of Env. Protection, Div. Of Air Resource Mgmt.	850-488-0114	850-488-0114	panchakarl_v@dep.state.fl.us
Hank Naour	Env. Protection Agency, Bureau of Air	217-785-1716	217-524-5023	epa2211@epa.state.il.us
Jose Garcia	Dept. of Health, Bureau of Air Quality	801-536-4073	801-536-4073	jgarcia@deq.state.ut.us
Kirsten King	Health & Env. Protection Office, Air Pollution Control Div.	303-692-3212	303-692-3212	kirsten.king@state.co.us
Renaldo Crooks	Stationary Source Division, Californial Air Resources Board	916-327-5618	916-327-5618	rcrooks@arb.ca.gov
David Morales	L.A. County Sanitation Districts	805-645-1411	805-645-1411	davidmo@vcapcd.org
Rod Millican	S.Coast Air Quality Management District	909-396-2591	909-396-3341	rmillican@aqmd.gov
Mike Davidson	Illinois EPA	217-782-7087	217-524-5023	epa2139@epa.state.il.us
John Jenks	Dept. of Health, Bureau of Air Quality, NSR Permitting	801-536-4459	801-536-4459	JJENKS@deq.state.ut.us
James Chapman	Dept. of Health, Bureau of Air Quality, Operating Permit Sect.	801-536-4471	801-536-4471	JCHAPMAN@deq.state.ut.us
Patrick Sheehan	Dept. of Health, Bureau of Air Quality, MACT Standards	801-536-4176	801-536-4176	PSHEEHAN@deq.state.ut.us
Jim Topsale	EPA Region 3	215-814-2190	215-814-2114	TOPSALE.JIM@epamail.epa.gov
Christine DeRosa	EPA Region 2	212-637-4022	212-637-3901	DEROSA.CHRISTINE@epamail.epa.gov

***Subcategorization*** —Tom Christoffel asked if EPA plans to use a particular size threshold for applicability. Hank Naour asked whether the MACT process will examine area sources. Michele Laur responded that EPA does not use the same methods for MACT standards as it does for NSPS standards. As a example, she noted that the NSPS size cutoff for applicability started with 1 million Mg, landfill industry representatives suggested 5 million Mg was more appropriate and the final result was a size cutoff at 2.5 million Mg based discussions with interested stakeholders. For the MACT standard, EPA could use size to develop subcategories rather than a size cutoff exemption but data would be required to support that approach.

With regard to the area source issue, MACT rules primarily cover major sources but can include area sources under certain conditions. The inclusion of this source category on the Urban Air Toxics list is sufficient justification for further evaluation of area sources in this rulemaking effort.

Tom Christoffel noted that EPA will have challenges because landfill sizes range from 1 acre to "Fresh Kills size. " Michele Laur responded that smaller landfills might be expected to generate fewer emissions. However, we need to determine if small landfills are an issue. For example, she noted that she recently received information regarding an 18-acre, 10 to 15 year-old closed landfill in Ohio. State personnel went to the site and within 15 minutes of a 3-minute exposure to the vent gas, they had red rashes on all parts of their skin exposed to the gas. Her conclusion is that nothing can be ruled out yet.

Michele Laur then stated that EPA may delineate between area sources and major sources before developing the MACT floor. They may also develop subcategories if the data warrants subcategorization.

## **4.2 Streamlining and Integration with NSPS and Other Rules**

Several stakeholders discussed topics related to streamlining both the MACT development process and the MACT standard, itself. A key issue was coordination with NSPS, EG, and other State Rules.

***NSPS Sufficient for MACT?*** – Hank Naour stated that when EPA establishes the MACT floor, it would not be clear how many sources might have surpassed 98 percent emissions reduction because of the NSPS/EG requirements. In this way, he contends that MACT floor development for landfills will be different than for other NESHAP source categories. He also asked how EPA can coordinate its efforts with the regulated community and other stakeholders since the facilities are already in regulatory response to the NSPS/EG.

Mr. Naour then stated that the Illinois EPA and its affected sources are always looking for ways to streamline compliance. For example, the Section 111 rule had lots of simplification for incinerators. He wanted to know if there is any way EPA can use the Section 111 authority base to integrate into a current rule as was done with Section 129 (for incinerators). He noted that Section 129 considered specific HAP such as Mercury and HCl. EPA was able to make an interconnection and created a single, composite standard that address both the state and federal regulations.

Jim Cox responded that there is more of a statutory basis for what was done with combustors because Section 129 had a specific reference to Section 111 requirements. Thus, the streamlining was made somewhat easier. Mr. Cox did not know if a similar cross-reference exists between Section 129 and the Section 112 requirements.

Michele Laur responded that EPA will try to coordinate and streamline its efforts as much as possible. She indicated that EPA will determine if there are any cross-references between Section 129 and Section 112 requirements. She noted that, in the development of other MACT rules, EPA tried to find out how other state and federal regulations affected the source category. EPA will take State rules into consideration when developing Federal regulations where possible and appropriate. States and regions can help EPA identify these opportunities since they are most familiar with their own regulations. She said that the possibility exists for states to demonstrate that compliance with specific state regulations or portions of regulations is equivalent to compliance with the MACT standard for MSW landfills. Michele Laur also emphasized that the tight schedule requires quick input from stakeholders.

David Morales noted that, for a landfill, the control system is the easy part to gain an understanding of, and the collection system is the difficult part. He pointed out that control systems requiring 98 percent NMOC reduction are already in place for NSPS sources. If EPA considers the composition of the landfill gas and the relative concentration of HAP (which is on the ppm level), it may be that the NSPS has done a major part of the work toward controlling HAP emissions. Going above and beyond the NSPS level of control may not gain much more. Also, he noted that the detection limits for existing test methods preclude verification of controls much beyond 98 percent destruction efficiency.

Mr. Morales suggested that EPA spend time and effort to get a better idea of what is being emitted (dioxins, furans, metals, etc). However, he noted it would be better for EPA to start with the NSPS data set to see how it can be enhanced to address HAP, rather than reinventing the wheel. He also indicated that the cost-benefit analysis done for NSPS is probably applicable to MACT and might be incorporated into the PMACT analysis.

Michele Laur responded that EPA wants to avoid duplication of effort. She indicated that it is possible that the NSPS level of control may become the MACT floor. However, EPA is still obligated to determine which parts of the NSPS analysis will work for the MACT analysis, and which will not. For example, in the 1980s there were perhaps hundreds or thousands of smaller landfills. The trend today is toward a smaller number of larger facilities. Another issue is how landfills are processing leachate. The Office of Water has developed a new rule that looked at how HAP in leachate would affect groundwater. The MACT development team will look at potential volatilization of HAP into the air. She emphasized that the MACT development must account for all possible sources of HAP emissions from MSW landfills.

David Morales asserted that if the trend in landfill sizes is going from smaller to larger, then there is improved potential for controlling NMOC and HAP because larger landfills would more likely be captured by the NSPS requirements. Thus, there should be less concern about the size trend impacting the MACT project. He also noted that in big picture terms, landfills that are collecting gas because of the NSPS requirements have highly detailed recordkeeping requirements. He said it would

be inappropriate to assume that the existing data and requirements cover everything needed for MACT, but it makes sense to reiterate that they need to be considered.

Michele Laur responded that credit will be available for any co-control (i.e., destruction of HAP through destruction of NMOC), but EPA would be negligent to assume that NSPS covers all the issues and that there is nothing else to look at. The biggest tasks are to evaluate whether smaller landfills are a concern, and whether leachate is a problem.

***Cost Benefit Analysis*** -- Rod Milliken stated that for landfill GTE projects, EPA must take a close look at the amount of revenue generated from power, compressed natural gas (CNG), liquid natural gas (LNG), hydrogen, etc. He asked whether all these factors will be included in the cost-benefit analysis. Michele Laur responded that EPA will look at these factors. Michele Laur also noted that economic analyses will be conducted in two different places: at ERG, and also at EPA through its in-house economics staff.

#### **4.3 Other Technical Issues**

***Collateral Emissions and Post-Combustion Controls*** -- Hank Naour stated that for landfill HAP and NSPS controls (flares or GTE projects), the significant pollutants that come out are metals (that carry through the controls), and HCl generated because of many chlorine-containing compounds in municipal waste. What may be needed is a post-combustion scrubbing process, or perhaps a pre-combustion scrubbing process for reducing HCl.

Mr. Naour then suggested that what may now be required is changing the whole mode of what MACT standard might have looked like had it been generated three years ago. The current situation requires examination of a post-combustion process instead of the combustion process, itself.

***Format of Standards*** -- David Morales asked how HAP definitions will be addressed for landfill gas, and whether EPA will try to define exactly which species are covered by this MACT. Michele Laur responded that there will be a list of the HAP of concern, but that the standard will probably be written with a surrogate compound (not yet identified) for total HAP.

#### **4.4 Data Requests, Data Management, and Data Analysis**

***Test Data Development*** -- Hank Naour asked how industry stakeholders (WMX, BFI, Rollins, etc.) will be involved with data development. He noted that most sources will be using enclosed flares, and that it would be in the interest of landfills to create data that are more meaningful than what is currently in AP-42. As an example, he offered that the National Marine Association contributed some testing and data-gathering efforts for the boat manufacturing MACT. These data are now being used by the NESHAP team and by state agencies for other efforts. He suggested that EPA should work with SWANA to obtain meaningful data rather than using old information. He said that in past efforts, it has been shown that it is detrimental to use old data, and that things did not improve until the more current data were available.

David Morales stated that pooling resources with SWANA for testing on dioxin and other compounds is very possible if it becomes a priority. They have been measuring air toxics in California for 10 to 15 years, and there are people with excellent experience in this area. He added that landfill gas emission estimates are highly variable and that the AP-42 list only scratches the surface.

Michele Laur responded that EPA will want to explore cooperation with industry to develop new data. She indicated that much of the newer test data is from California and that other states need to be represented. Also, EPA would like to use this rulemaking process to settle issues regarding dioxin from landfills, because EPA is receiving negative comments regarding the Landfill Methane Outreach Program work with industry on landfill gas-to-energy projects without addressing public risk from dioxin. However, she emphasized that the tight schedule will require EPA to use existing data, at least in the beginning.

***Coordination with Other Programs*** -- Hank Naour noted that a problem in Illinois would be that the EG allowed them to draft rules that exempt facilities below 2.5 million Mg. These facilities require no permits at all, which may mean that there is no data available about these facilities.

Lisa Huff responded that solid waste staff may be better sources of information for the smaller landfills. Michele Laur noted that team members from the Office of Solid Waste will be involved in the rulemaking process.

## **5.0 ACTION ITEMS**

In response to stakeholder questions, Michele Laur and Lisa Huff reiterated that the MACT team would like to receive data as soon as possible. Desired data include emissions data from control devices and GTE projects, as well as lists of all MSW landfills whether small or large, open or closed (except for facilities closed before the 1987 NSPS cutoff date). The level of data collected for the NSPS is sufficient for now and States will not need to issue a new survey at this time.

For all submittals, electronic format is preferred. Lisa Huff is the primary contact for data collection, and she will send her e-mail and mailing addresses to everyone along with a list recapping the types of data needed.

Renaldo Crooks and Tom Christoffel volunteered to send their databases of closed and open landfills in California and New York. Lorraine Anderson asked if EPA could provide its current list of landfills so that the states don't duplicate efforts. Lisa Huff will email copies of the EPA database, screened to remove proprietary information. Lorraine Anderson mentioned that there may be small landfills that are major sources. Lisa Huff indicated that EPA needs numbers for these sources.

Lorraine Anderson asked about confusion with Title V programs and other requirements affecting landfills. Sources sometimes send information to EPA instead of the appropriate State regulatory agency, and vice versa. Clarification would be useful. Jim Thompson asked for clarification on what is and isn't proprietary information.

Michele Laur indicated that EPA will use email and the TTN to coordinate the data gathering effort and to share information gathered during the MACT development process. With regard to the issue of proprietary information, the determination is usually made on a case by case basis using input from the source with the exception of emissions data which is public information.

## **6.0 NEXT MEETINGS**

Michele Laur noted that the next meeting will probably be around November 9 to coincide with an industry group that is meeting in RTP on November 10, 1998. There will be another call in January to discuss PMACT. All meetings will be held in RTP with a conference line open for call-ins.

## **Attachment A**